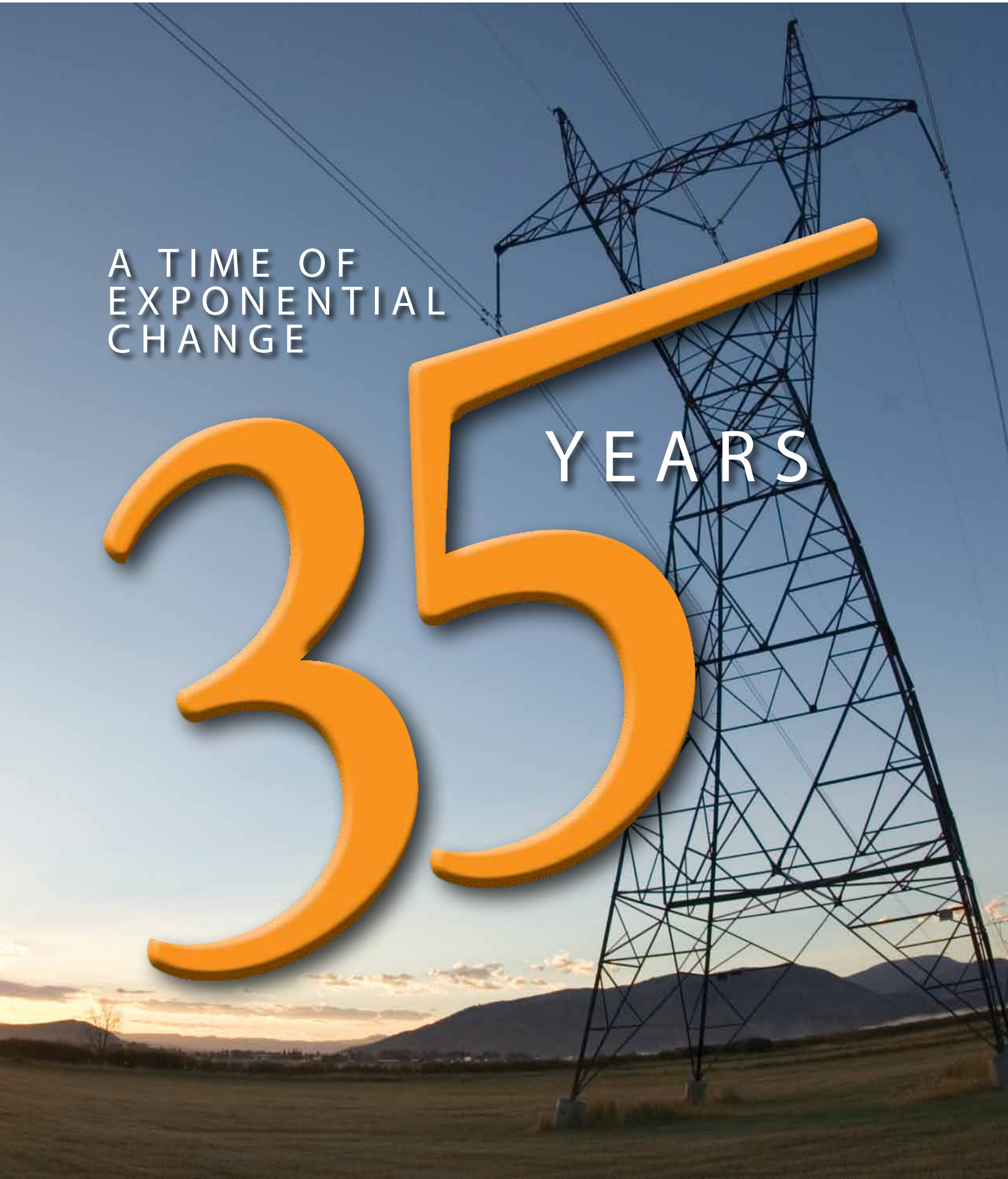
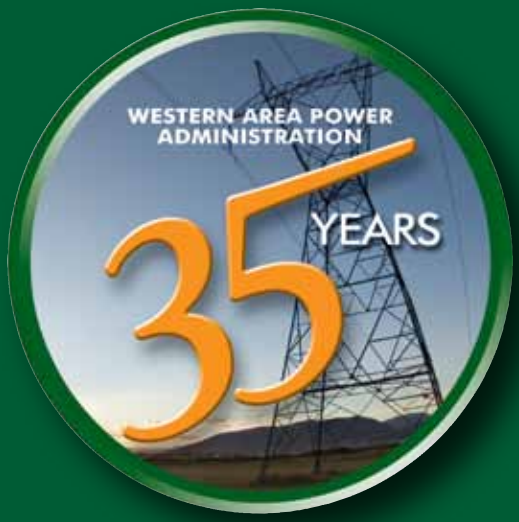
WESTERN AREA POWER ADMINISTRATION





For Western's 35th Anniversary celebration, Western collected stories of how employees and teams contribute to the agency's mission and the changes they have seen during the past five years. Through all of this, Western in 2012—at its heart—is the same agency it has always been.

Contents

Engineering feats require creativity, logic

The work of Western engineers is evident everywhere you look; whether you're driving past transmission lines, visiting a substation or checking out a communication tower, their designs are visible throughout the West. Even before Western was an agency, engineers built the dams and transmission infrastructure that brought Federal hydropower to market.

Opportunity for new technology, engineers

Since inheriting much of that infrastructure, Western's engineers have continued to upgrade, update and expand the transmission system.

Building on the tools, processes and knowledge of the Engineering office, Western has kept pace in the past five years with changes in technology and staff.

For the latter, Western's turnover has helped maintain its currency with industry changes. "The Engineering office has hired more than 10 new engineers and designers during the past five years," said Corporate Services Office Engineering Design Manager Phil Davis. "New designers bring up-to-date design ideas from engineering colleges and other industries. As we mentor our new staff, our normal design practices are reviewed and refined."

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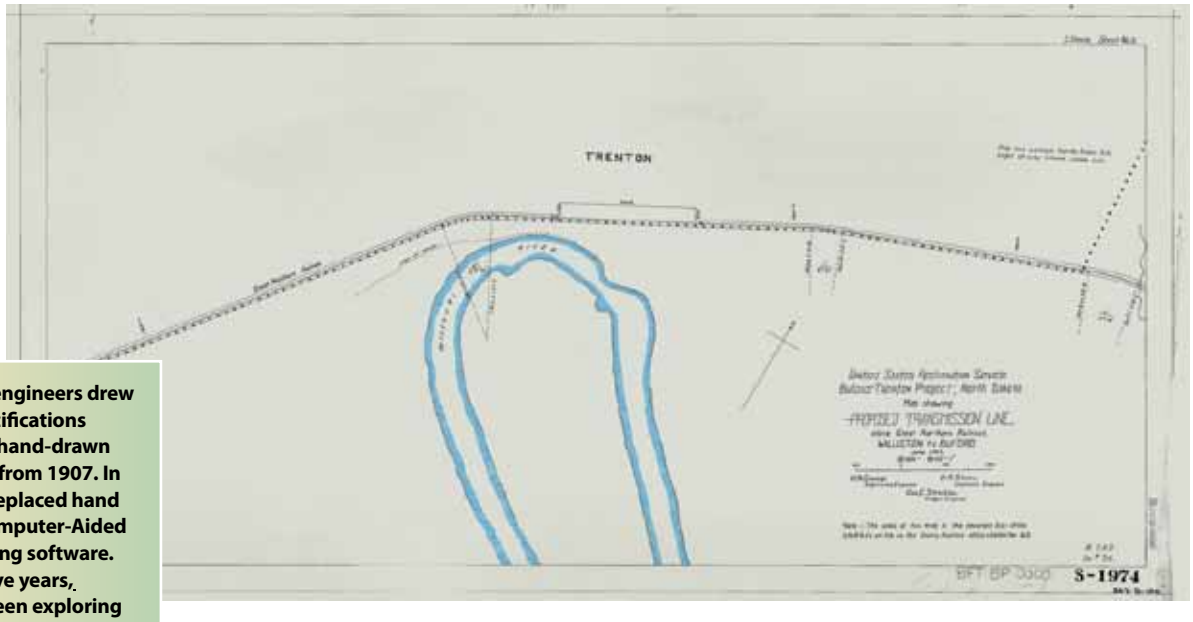

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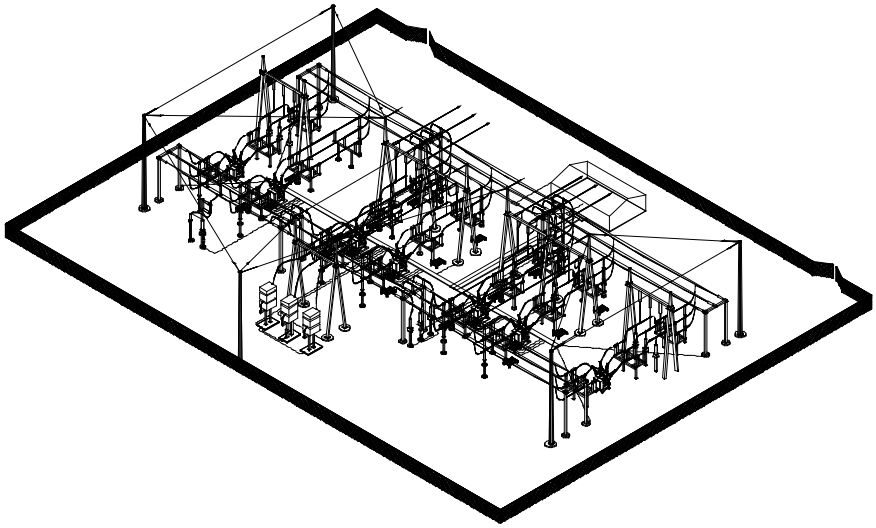


In the early days engineers drew transmission specifications by hand, like this hand-drawn transmission line from 1907. In the 90s Western replaced hand drawings with Computer-Aided Design and Drafting software. Within the past five years, engineers have been exploring 3-D modeling of equipment to gain a complete view of the system, like this substation model.

Civil Engineering Manager Doug Hanson said that engineers also have a storehouse of new tools that help with design and consistency throughout the agency:

- **Light Detection and Ranging survey data**—known as LiDAR, it provides the accurate survey data that the terrain model engineers use for design.
- **Power Line Systems-Computer-Aided Design and Drafting**—also called PLS-CADD, it is software that allows for faster and more cost-effective transmission line designs, as well as design scope changes, structure moves, new utility crossings, North American Electric Reliability Corporation mitigation options and thermal line ratings.
- **3-D modeling**—is a tool that allows the designer to visualize the substation site or transmission line and analyze it as a complete system rather than individual components.

Engineering also updated its processes for working on projects beginning in 2008. "A team from across the agency developed the Digital Control System Standard," said CSO System Control Manager Dan Hamai. "This standard provides a Westernwide control design that creates efficiencies in design costs, equipment, field commissioning and our knowledge base."

The interest in synchrophasor technology has also included engineers in projects involving the Western Electricity Coordinating Council and Midwest Independent System Operator. Synchrophasors will improve situational awareness at certain points on the grid and, ultimately, improve system reliability. Our Engineering group has supported efforts to install Phasor Measurement Units and Phasor Data Concentrators in the regions as part of these projects.

What are synchrophasors?

Synchrophasors are grid measurements taken from monitors, called Phasor Measurement Units or PMUs. PMUs measure voltage, current and frequency 30 times per second, and each measurement is time-stamped according to a common time reference. Time-stamping allows synchrophasor data from different utilities to be combined and provide a precise and comprehensive view of the entire interconnection.

Land Surveyor Corey Diekman prepares equipment to survey Ault Substation in Colorado for the Stage 07 Design, April 9, 2010.

System age, equipment integrity changed

Modernizing and updating existing substations and transmission lines that may be 30, 40 or 50 years old continues to pose challenges for Engineering. "We have seen substations upgraded to double bus–double breaker configurations," said Davis. "This has a significant impact to the existing control design; attention to detail is critical to get the design right."

To address this challenge, Davis added that, "Good communication and coordination are necessary to get all of the requirements up front and understand the challenges that field employees face with outages and staging the work."

Keeping the transmission system modern depends greatly on the equipment available. For example, a change in the production of porcelain suspension insulators impacts our system reliability. "They are no longer being made in the United States, and inferior products have been received," said CSO Electrical Engineering Manager Ross Clark. "We have revised our specifications and prepared an indefinite delivery and indefinite quantity procurement contract with two of the better insulator manufacturers."

Workload expands for compliance

Like much of Western, Engineering staff has faced increased demand for the analysis and reporting required of NERC's compliance program. Helping regions meet NERC reliability standards and keeping up with transmission line requirements have added to the shop's workload.

"After an outage in the northeast United States, NERC strongly advised utilities to verify that their transmission lines were constructed as designed and still had adequate clearances," explained CSO Senior Transmission Line Designer Steve Rock. "This required surveying and analyzing our high-priority transmission lines."

Although Engineering has had several changes in systems, processes and personnel, at the heart of the products is creativity. It's in the designs, schematics and plans that the engineers bring to life. □

Western's Top 10 engineering projects 2007-2012

1. The Keystone Project, including upgrades to Carpenter, Letcher and Utica Junction substations in Upper Great Plains
2. Desert Southwest's Davis Substation upgrade - Stages 05 and 06
3. Rocky Mountain's upgrade of the Cheyenne, Miracle Mile and Snowy Range substations
4. Sierra Nevada's replacement of the California-Oregon Transmission Project relays
5. Spectrum Relocation Project moved Western's communication systems out of the 1710 to 1755 megahertz band as part of the Commercial Spectrum Enhancement Act, which auctioned frequencies previously used by Federal agencies
6. The Arc Flash Project, which provided analysis and reports for the substations in DSW, SN and Upper Great Plains
7. SN's Trinity-Weaverville 69-kilovolt transmission line across difficult terrain
8. SN's Tracy–Delta Mendota Canal Intertie Project
9. Beaver Creek-to-Big Sandy 115-kV transmission line in RM
10. DSW's Gila-Yuma Tap 34.5-kV and Gila-Gila Valley 34.5-kV transmission line replacements and optical overhead ground wire installation projects

Upper Great Plains Engineering Technician Kyle Vaughn, left, and Lineman Jeb Bordewyk open crates of insulator strings at Rapid City Field Office in South Dakota to investigate for weaknesses on Dec. 15, 2009.

Maintenance manages compliance, constraints, construction

Ask any Maintenance manager what the biggest challenge over the past five years has been and the answer is undisputed: regulations and constantly changing industry standards.

"We used to be able to schedule our projects and run with an occasional maintenance backlog depending on workload," said Upper Great Plains Maintenance Manager Scott Mallard. "Now we're working in a zero-tolerance environment, where you must complete maintenance by a certain date; there's no leeway to go past that date."

The North American Electric Reliability Corporation continues to send out alerts and revisions to existing standards. "We have to continually react to meet the requirements of the reliability standards," said Mallard.

Documentation added to the workload

Proving to NERC you performed maintenance on time means documenting all activities. "There's no room for failure. Documenting activities has increased the workload for everyone, but especially for crew foremen who are in charge of identifying priority maintenance tasks and then planning and scheduling them," said Rocky Mountain Maintenance Manager Kevin Howard.

"WE JUST HAVE TO DO MORE WITH THE PEOPLE WE HAVE."

Most groups are trying to divvy out the processes and documentation responsibilities between crews and office staff. "We just have to do more with the people we have. The hands-on people in the field and support people in the office work together. It's a huge effort and we're trying to spread it out across functions," said Mallard.

Documenting maintenance is critical, but making sure the documentation is organized and readily available is also very important. Western is migrating all its Maintenance documents to an electronic database. "We completed our initial efforts in our Desert Southwest region in 2012," said DSW Maintenance Manager Rick Hillis.

Audits confirm Western's reliability

To ensure Western is meeting the new regulations, NERC conducts audits every three years. Between October 2011 and December 2012, Western passed four audits in its regions. "These audits require preparation in addition to our normal maintenance workload and construction effort. The review of our processes and procedures and the preparation of supporting documentation associated with the audit is a tremendous effort," said Sierra Nevada Maintenance Manager Steve Upton. "We've come a long way in the past five years using Reliability Centered Maintenance and asset management to support our compliance efforts; it's making it easier to retrieve documentation and manage the requirements, but the real asset here is our employees. The Engineering staff, craftsmen, Maintenance specialists and program managers have all worked extremely hard to ensure we achieve and maintain our compliance obligation. They're very dedicated and have done an excellent job."

SN manages congestion with live-line work

In California, scheduling outages continued to create challenges. Regulations and a heavily loaded system typically limit planned outages to certain times of the year when system loading is at a manageable level. Also, Western interconnections and possible impacts to other utilities dictate the ability to take lines or system equipment out of service. The other utilities are also competing for outage time during these periods as well, which necessitates accurate long-range planning and coordination. "We plan and prepare for outages between all entities because it affects us all," said Upton. "We can talk planning at the beginning of the year, but fitting it all in is difficult."

SN crews are also managing agricultural and environmental constraints on the lines. The ability to get the equipment onsite is often difficult because of agriculture considerations, such as orchards, rice paddies and protected species, each of which can make it challenging to access the worksite. "We have great Lands and Environment staff that work ahead of us so that we can get out and do the work," said Upton.

Helicopter support has proved to be a solution for a heavily loaded system and environmental constraints. SN line crews now conduct many of their maintenance tasks on our transmission lines using helicopters, including live-line maintenance. The helicopters cut down the time of conventional methods and reduce most of the land and environmental impacts associated with the work. "I'm proud of them. They are doing long-line work from the helicopter," said Upton. "There's some risk, but some real benefit as well. The guys are great at it."

THEN

Western linemen used bucket trucks or simply climbed transmission structures to get up to the conductor and maintain Western's lines. In the past five years, Western has incorporated helicopters as a way to transport linemen from the ground to the top of transmission towers for maintenance work.

A line crew works from a bucket truck to build a shoo-fly near North Fork Substation outside of Hotchkiss, Colo., about 50 miles north of Montrose in 2008.

NOW

A helicopter transports two linemen to the top of a transmission tower in northern California in 2011.

UGP sees more construction requests

In addition to the routine work of maintaining and repairing structures and equipment, staff must consider upgrades and new construction. "It requires more planning, especially at a time when we're doing more construction and commissioning for load growth. Our construction and maintenance projects are not dropping off at all," said Mallard.

Mallard is talking about the additional load growth in western North Dakota and eastern Montana due to the recent oil boom in the Bakken formation. "The Bakken oil field is growing because they now have the technology to go get the oil out," said Mallard. "It's constant; the number of people moving into the area has grown exponentially, and they're still in the early stages of drilling."

RM inspection advancements

In RM, Maintenance staff put a lot of emphasis on inspection tools for substations and transmission lines. For substations, RM electricians use personal digital assistants, or PDAs, to conduct inspections and document what maintenance tasks need to be done. This information is directly uploaded from the PDA to MAXIMO, Western's asset management tool. "We can take the data captured monthly at substations to evaluate the condition of each piece of equipment there," explained Howard. "With this process, it's easier to monitor and track data and the assets by pulling reports."

RM also has an equivalent inspection tool for transmission lines. In the past three years, every structure (38,657 in total) has been synced to a geographic information system using this ground inspection tool. "When the linemen are within 100 feet of the structure, the GIS link in the tool talks to satellites and logs the inspection directly into the system," said Howard. "Linemen flag problems on structures and then rate the severity. A 'very severe' rating would get a higher priority for work. That's also how we identify the following year's work."

Western is looking to have a standardized maintenance tool that, using GIS, tracks every structure it owns. Howard explained how documenting structure locations and data in GIS helps maintenance work with other functional areas like Lands and Environment. "Now we can mark and track archeological, historical and biological avoidance areas," said Howard. "So if we're doing a project, [Environment staff] can go into GIS and see if there's anything that needs to be addressed before we go out."

The ground inspection crews work hand in hand with aerial inspections of transmission lines. "The two inspection processes are really complementary," said Howard. "There are things from the ground you can't see from the air and vice versa."

Safety concerns, tech advancements continuous

Amidst the many changes over the past five years, some things do remain the same. Technology continues to evolve at a rapid pace, bringing with it both solutions and challenges; and safety remains the number one concern in the Maintenance world.

Using technology to support efforts

Technological advances are helping support employees' widespread efforts including new microprocessor-based relays. Although traditional relays detect disturbances in the power system and begin the process to de-energize a faulted component or transmission line, the new relays are more like mini-computers gathering more information about the system. "We're quite comfortable with the new technology we've been installing in the last few years," said Mallard. "Microprocessor-based relays can require less maintenance, but require a different skill set than the old electro-mechanical relays."

Once installed, the relays provide system protection. "There's very little maintenance needed once you get them installed, and they keep the system reliable and safe and provide us with vital information for locating faults and disturbances. They can also help us trend the health of the system," said Upton.

DSW Engineering and Construction Manager David Radosevich shared some other advancements and tools Western maintenance staff use, specifically:

- **Surveying tool:** Using Light Detection and Ranging, known as LiDAR, to determine system condition.
- **Laptops in vehicles:** Construction Control Representatives use laptop computers to quickly receive information and notify staff of potential problems onsite.
- **Google Earth, GIS and Global Positioning System:** Enables Maintenance staff to evaluate potential problems immediately using maps and data in the system.
- **Electronic contract review:** Using email to review and approve contractor submittal and construction issues. This means contractors can get an immediate approval or disapproval and correct the issue immediately.
- **Safety videos on-site:** Show Western contractors safety information during their pre-job safety meeting.

Safety still 'king'

Regardless of changes in processes, equipment and time constraints, nothing is more important to Maintenance managers and staff than the safety of every employee on the job. "I'm thankful that we drive so many miles, in a region that covers as much area as UGP's, with so few vehicle accidents," said Mallard. "We cover a lot of ground without a lot of transportation issues."

For DSW driving continues to be the primary safety challenge. "Being centrally based out of the Phoenix metropolitan area and the amount of miles driven contribute to the risk," said Hillis. "We continue to proactively apply the SafeStart principles and critical reduction techniques and minimize driving distractions to maximize our focus on the prior task at hand—driving."

In fact, the SafeStart Program has changed Western's safety training in the past five years. "SafeStart has really advanced and become a part of our safety culture," said Howard. "We've integrated a behavior-based safety program. One notable outcome is that our recordable accidents have gone down from 14 in 2008 to only four last year. I am hopeful it's a trend that will continue downward." □

Breakers are replaced at Flagstaff Substation in Arizona. (Photo courtesy of Stanley Spencer)

A satellite image of Hurricane Sandy as she approaches the East Coast, Oct. 28, 2012. (Image from NOAA-NASA GOES Project)

From the Field: 'Superstorm' Sandy prompts super response

Early Oct. 29 Hurricane Sandy, spanning 1,100 miles and becoming the largest Atlantic hurricane on record, made landfall near New York and New Jersey. Her impact was devastating, leaving 7.5 million people without electricity, causing an estimated $20 billion in damage and taking the lives of 131 people.

On Nov. 1, 2012, President Obama offered Direct Federal Assistance, meaning 100-percent payback to Federal agencies that were able to respond to the emergency, allowing Western to help in the power restoration effort. This was historic as Western had never before responded to an effort of this magnitude so far away from its service territory.

Quick coordination gets crews in the air, on the ground

As a first step, the Department of Energy asked Western to submit a list of all personnel and resources it could provide, along with an estimate of what it would cost.

DOE wanted as many people and resources as Western could spare to arrive in the affected area within three days, staying for 10 days of work. Although Western had crews and equipment available in Sierra Nevada, they wouldn't be able to make it within the three-day time frame. Through coordination with the Federal Emergency Management Agency, DOE and the Department of Defense, another monumental event took place: SN teams were airlifted by the U.S. Air Force, Nov. 2, from Travis Air Force Base in Solano County, Calif., to McGuire Air Force Base in New Jersey.

Crews from Rocky Mountain, Upper Great Plains and Desert Southwest drove to New Jersey in Western vehicles. Additionally, Western sent two helicopters with pilots to assist local utilities with damage assessment.

"Our hearts go out to all those who have been affected by this devastating storm," said Acting Administrator Anita Decker Nov. 2. "Western is proud to be part of this effort to help restore power as quickly and safely as possible."

Collaboration across government, with private sector

Back in Washington, D.C., multiple agencies were coordinating the Federal response. FEMA and DOE decided where crews were needed most and sent them to some of the hardest-hit areas. Two of Western's sister power marketing administrations—Bonneville Power Administration and Southwestern Power Administration—also lent people and resources to the effort. BPA sent mostly substation crews and worked predominantly in New York, while SWPA sent line crews and worked together with Western crews in New Jersey.

Western was assigned to work with FirstEnergy Corporation, an energy company that serves 6 million customers from Ohio to New Jersey.

In addition to sending crews, Western sent a management representative to coordinate Western's and SWPA's efforts. Western Colorado Montrose Office Division Maintenance Manager Will Schnyer served in this capacity based on his experience working disaster response efforts for Western and Florida Power and Light.

Getting boots on the ground

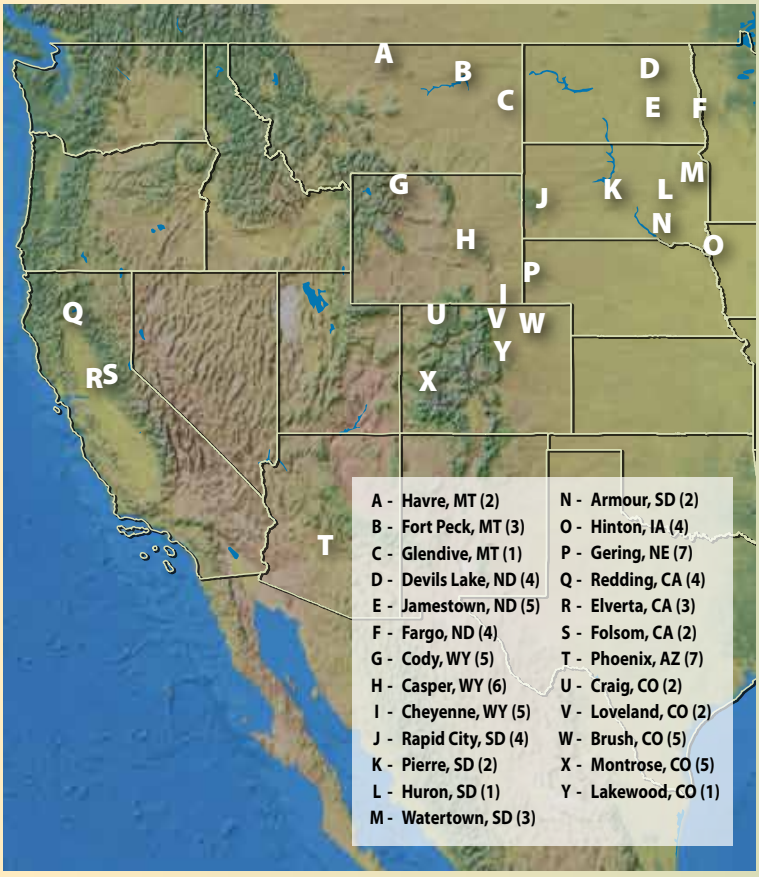
Working a disaster response can be chaotic, especially in the beginning; it took a few days to sort out where people were needed most and who would do what.

RM Safety and Security Manager Bill Marsh explained, "You have to keep in mind, this area was being flooded with line workers from all over the country and Canada. Everyone was arriving and didn't have assignments yet." After a few days the effort became better organized and work quickly picked up. Marsh continued, "Once our crews got busy, they demonstrated a level of expertise and professionalism that impressed the local utilities."

Crews work long hours, rough days

From Nov. 5-16, Western crews repaired crossarms, transmission and distribution lines, and other system equipment. Usually working 14- to 16-hour days, crews endured dangerous winds, heavy rain and snow.

Talking about the barrier islands, DSW Foreman II Lineman Ronnie Martinez reported, "Houses were off their foundations, power lines were down and houses were burning—the area was just demolished. It was a sad, sad scene … total devastation."



Field offices that responded to the call

Western sent 77 linemen (including seven apprentices and 12 foremen), three mechanics, two helicopter pilots, six electricians and three management representatives from 25 offices to New Jersey to assist the power restoration effort days after Hurricane Sandy made landfall. Employees from northern California were airlifted by the U.S. Air Force, helicopter pilots flew from Loveland, Colo., and Phoenix, Ariz., and the rest of the crews drove from their respective field offices. This map shows the number of employees each office sent back east to help in November 2012.

Before crews arrived, residents of the barrier islands had been evacuated. Schyner added, "When we first showed up, the area was heavily guarded by the National Guard and state police from all over the eastern half of the country. Road blocks were set up every half mile or so and we had to continually stop at each one and identify who we were and what work we were performing."

On Nov. 9, crews were fully engaged rebuilding the hardest-hit areas and received high praise from Jersey Central Power and Light, a FirstEnergy company. Although JCP&L sent some crews home, they signed a mutual aid agreement to keep Western and SWPA crews working beyond the initial 10 days.

"It was nice, as an employee of a Federal agency, to be asked to go and assist with Hurricane Sandy storm restoration efforts," said Schnyer. "Every FirstEnergy manager I spoke with was impressed with our workers, our equipment and the quality of our work."

Patricia Mullin, general manager of JCP&L shared, "I cannot thank you and your workforce enough for coming and assisting us. Your group's work ethic and drive is admirable and we all enjoyed working alongside of you."

Western learns lessons

Western accomplished a lot of work quickly and safely, representing DOE and PMAs well. "It's a big, positive thing for Western," summarized Marsh. "A lot of it had to do with the leadership Will Schnyer demonstrated on the ground in New Jersey. He continually communicated Western's capabilities to FirstEnergy, kept our crews working within the scope of their mission assignment and served as the main channel for information from the field to the rear."

Before the dust settled, Marsh shared the two most important take-aways:

1. We need to be better prepared ahead of time. If called again to assist with something like this, we will have lists of personnel and equipment available for support.

2. We need to develop more emergency response personnel who also have deep knowledge of Western. It is imperative to have a single point of contact to orchestrate a response and know all the players in Washington, D.C.

With many lessons learned, Western is prepared to be called for this type of work again. ☐

A combined Sierra Nevada and Rocky Mountain crew works in the rain to replace a wood pole that was broken by wind and fallen trees during Hurricane Sandy, Nov. 7, 2012. (Photo by Joel Carrillo)

Power Marketing: It's what Western does

Looking at our mission statement, you discover power marketing is the verb that describes what Western "does." In fact, Western administers more than 1,500 power marketing contracts with customers and interconnected utilities for selling Federal power and related services. In turn, those wholesale customers provide electric service to 50 million customers.

In the past five years, much of what Power Marketing employees do is the same: connecting to customers through meetings and other communication avenues and managing marketing plans and rates. There have been Power Marketing Initiative updates, standardized tools and processes, more automation, changes to customer rates and process improvements to maintain rates-related files electronically.

"In some respects things have stayed the same, but in others they are changing rapidly," said Rocky Mountain Power Marketing Manager David Neumayer.

Two primary areas include regulatory changes and the continuing evolution of energy markets around Western, including the Midwest Independent System Operator and the Southwest Power Pool.

WE'RE WORKING TO DELIVER COST-BASED ENERGY THAT PROVIDES OUR CUSTOMERS WITH THE BEST PRICE WHILE MEETING THE COMPLICATED ENERGY INDUSTRY'S EVOLVING REQUIREMENTS.

Legislative, regulatory updates require more involvement, exploration

"We continually evaluate the extent of our participation in regional energy markets," said Corporate Services Office Power Marketing Advisor Ron Klinefelter. "We're experimenting with participation while keeping our core mission in focus."

Neumayer added, "One area of rapid change was triggered by [Federal Energy Regulatory Commission] Order 1000, which may have significant impacts to project planning processes and how costs are allocated for such projects. While Western has not formally joined a [Regional Transmission Organization], this order forces a number of RTO-like processes into non-RTO areas, and as a result, Western must integrate these changes into its way of doing business."

For the Boulder Canyon Project remarketing effort, Congress approved new legislation through the Hoover Power Allocation Act of 2011 to determine the basic criteria for allocating resources to the Desert Southwest Region's BCP current and future customers.

In California, Western is looking at how the Clean Air Act impacts marketing Federal hydropower. Meant to encourage renewable energy imports, the California legislation still requires more exploration from Western on two levels: as a provider of renewable energy and as a participant in the market. "In 2012 they were not considering large hydropower production as renewable," explained Sierra Nevada Power Marketing Manager Sonja Anderson.

Flaming Gorge Dam

Western continued to investigate if Federal entities in California are required to purchase energy under the Clean Air Act and how participation would affect customer rates.

Energy markets develop

In addition to legislation, energy markets in Western's territory are evolving.

When California's Independent System Operator implemented the Market Redesign and Technology Upgrade in 2009, Western had to keep up with the changes since 50 percent of Western's SN customers are in CAISO's balancing area. "In the past two years, Sierra Nevada has had about 10 major initiatives coming from the California ISO in response to FERC orders," said Anderson. "Regulations impact all of our processes and practices, so we need to be flexible enough to change quickly, since many times the deadlines are short."

Legislation amends 1984 Hoover Act

Signed into law Dec, 20, 2011, the Hoover Power Allocation Act of 2011 amended the Hoover Power Plant Act of 1984. The amendment permits Western to market Hoover Dam hydropower to Boulder Canyon Project customers after Oct 1, 2017, when the contracts were set to expire. The act allows customers to sign 50-year contracts to purchase hydropower and sets aside five percent of the project's capacity for new customers after Oct. 1, 2017.

In the Upper Great Plains region, about half of the firm load is outside of UGP's two balancing authorities and is mostly delivered into neighboring BAs that are in energy markets. That, coupled with the need to sell and purchase non-firm energy from those neighboring systems, drove changes in the way UGP interacts with those entities. "Historically, UGP Power Marketing has bought and sold non-firm energy through two contracts with many entities. In the past few years, that list has shrunk down to a handful of entities. When SPP implements its new market design, together with the existing MISO market, UGP will be surrounded by organized markets to the east and southeast of the Western interconnection," explained UGP Power Marketing Manager Jody Sundsted. "The organized energy markets really cause us to evaluate how we will do business in the future."

In addition to the ongoing SPP plan to convert from an Energy Imbalance Market to a regionwide, least-cost energy dispatch market in spring 2014, there is another proposed EIM for the Western Interconnection. Primarily meant as a market mechanism for merchant offices to buy and sell energy, an EIM is supposed to combine energy and demand over the regional balancing authorities and use available transmission capacity in real time. "Each balancing authority would have to decide whether to participate and then build the capability to do so," explained Neumayer. "Although Western already provides energy imbalance service in its balancing authorities, this new dynamic presents a significant challenge."

Marketing plans have continued to develop since Western separated from the Bureau of Reclamation. In this illustration from Upper Great Plains, marketing plans have adapted to account for energy planning since 2001. New plans provide the framework for marketing power.

Environmental contracts impact marketability

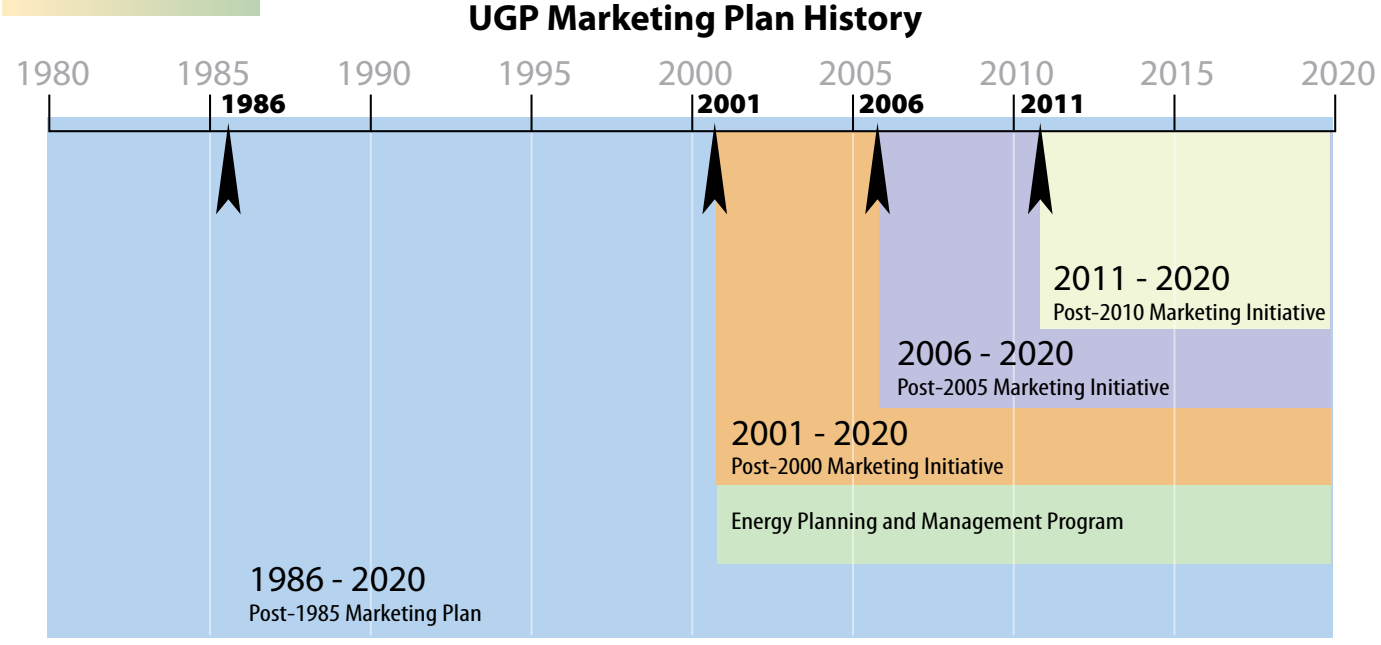
Addressing the environmental issues that impact marketing is a challenge in and of itself.

"We are still in the middle of many environmental issues concerning Glen Canyon Dam operations. These have caused uncertainties in available generation and our ability to meet our firm electric service contractual obligations," said Colorado River Storage Project Power Marketing Manager Rodney Bailey. "We have representatives on many environmental teams that are conducting studies and trying to shape the future operations of the Glen Canyon Dam. It is a delicate situation because of the many competing interests."

With the current market plan expiring Sept. 30, 2024, the CRSP Management Center is looking at how environmental issues will impact the next plan. "We should have some decisions in the next few years and will then know what our marketable resources are; then we will be able to move on with creating a new marketing plan," Bailey added.

Like CRSP, Central Valley Project is experiencing environmental challenges. The SN power marketing group is looking at the economic impacts of the CVP Improvement Act on customers, as well as the environmental charges included in the rates.

The full equation, with all its complicated variables including legislation, different marketing plans, changing markets and environmental costs, is what our Power Marketing community calculates: Working to deliver cost-based energy that provides our customers with the best price while meeting the complicated energy industry's evolving requirements. ☐



Customer involvement key factor in rates process

Rates employees' process and work relies on historical data, formulas and critical analysis all while engaging customers through the effort.

"We haven't changed the way we manage the rates since our rate methodologies were set for a five-year period," said Sierra Nevada Rates Manager Regina Rieger. Western is dedicated to keeping and building good relationships with internal and external customers through open and clear communication, and strives to maintain low, stable rates while meeting project repayment obligations.

"The biggest challenge for us has probably been figuring out how to keep our rates stable while still maintaining a reliable system," said Desert Southwest Rates Manager Jack Murray. "Infrastructure only lasts so long, and in many areas, especially with the Parker-Davis Project, assets are in service well beyond their expected life cycles. The customers understand the need for replacements and upgrades, but like everyone else in today's economy, they are concerned about cost increases. It's challenging and requires a lot of outside-the-box thinking, but it's also what keeps things interesting."

Hydro conditions fluctuate

In addition to aging infrastructure, Mother Nature also plays a role in rates. "The past five years have been an uphill battle with the Pick-Sloan project incurring more drought debt than any of us ever envisioned," said Upper Great Plains Rates Manager Linda Cady-Hoffman. "We developed the drought adder for Pick-Sloan and Loveland Area projects. As the drought deepened and then abruptly ended, what I have learned is no matter what the projections are for water, Mother Nature has the ultimate say and things can change quickly."

Those challenges—nature and system aging—required more creative thinking. "I've had to learn to be more comfortable with exploring creative ideas for rate design versus just continuing to use and refine old methods in a changing world," said Rocky Mountain Rates Manager Sheila Cook. "I've had to question many past decisions, policies and procedures that once worked, but are becoming obsolete."

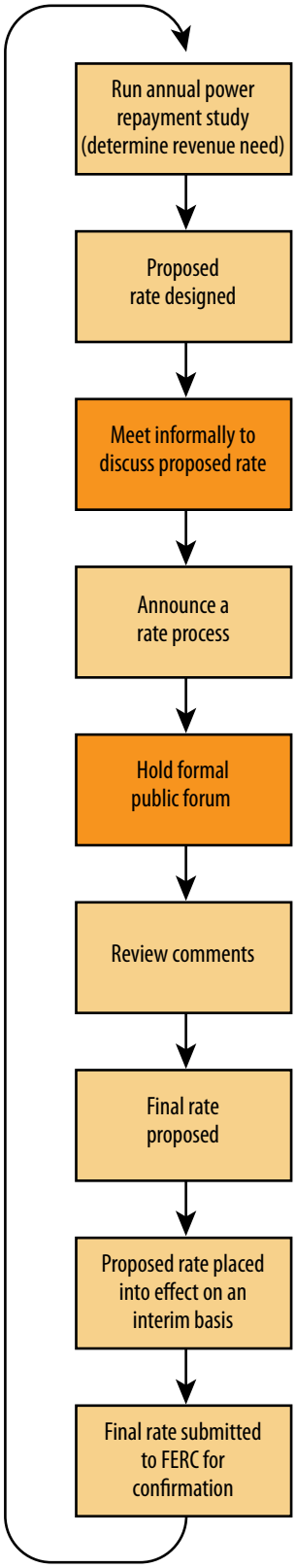
What's a drought adder?

Considered a drought-related component of the rate, a drought adder allows the specific portion of the rate to increase or decrease, without a public process, to cover costs associated with drought.

In some instances the rates have seen a change in system to support the development process. "How we manage and set our rates has converted from a macro-driven power repayment study, referred to as PRS, to a formula-driven PRS," said Colorado River Storage Project Public Utilities Specialist Tamala Gheller. The formula-driven PRS is much easier to work with than older versions. The biggest advantage the new PRS offers is the improved maintenance process and preserved data integrity. The macro-driven PRS was constantly having problems and required a lot of maintenance from our Corporate Services Office IT support. The new system automated a great deal of the maintenance process, which allows us to spend more time working ***in*** the PRS rather than working ***on*** the PRS."

While Rates hasn't seen a change in the way it does business, changes in costs and hydropower conditions constantly cause the end results to fluctuate. ☐

Rate Setting Process



The rate process requires calculating historical generation and accounting for changes in costs. But the key ingredient is working with customers. In this flow chart, the orange boxes show the important steps where Western works with customers during the rate-setting process.

Coming face to face with Energy Services

Energy Services' mission may seem simple—help firm power customers meet their planning obligations—but that short statement packs quite a load of activities. From helping customers answer difficult utility industry questions and meeting Integrated Resource Planning requirements to providing tools to test energy-efficient ideas, Energy Services makes it a priority to know how customers think and what is important to them; and how to develop solutions to help them fulfill Federal requirements. "We are a customer service-oriented group," said Energy Services Manager Ron Horstman.

At the team's annual face-to-face planning meeting in June 2012, there were more questions than answers. "We're constantly brainstorming and looking at how to keep up with the changes in the utility industry," said Horstman. "So we have to ask ourselves these questions and provide customers the information, but [customers] have to see where it fits in their communities."

In the past five years, technology has changed rapidly in the utility industry and for Western's Energy Services team. Since Western serves a broad range of customers—from large wholesale generation and transmission utilities to small municipalities—not all of them are keeping up with advancements at the same pace. "Some of the small towns we serve just have an Electric Department foreman running the show," said Horstman. "We just want them to know we're here to support them. We don't pick one customer over another. Instead we pick solutions that are transferable and have a wide application for many of our customers."

Among some of the top rapid-growth areas for Energy Services are IRP training and support, Equipment Loan Program and new communication styles.

Planning energy resources faster

For years, cost has been a primary concern for customers. Now new factors—including increased regulation and the need to meet Renewable Portfolio Standards—are driving customers to find the most effective way to serve the public while meeting these regulations and keeping costs as low as possible.

Rocky Mountain Energy Services representative Bob Langenberger knows this plight as he has trained several of Western's customers to help ensure they meet the IRP requirements.

Equipping customer with tools, knowledge

Our Energy Services representatives are just as concerned about the cost of their programs as customers are about the costs of energy. "New technologies have

"PHONES GIVE US ACCESS TO INFORMATION ANYWHERE WE GO," SAID HORSTMAN. "THEY BRING CUSTOMERS CLOSER TO THEIR POWER PROVIDER."

Infrared camera technology has come a long way. Equipment that used to require film and an extra battery belt has been replaced with a hand-held digital camera.

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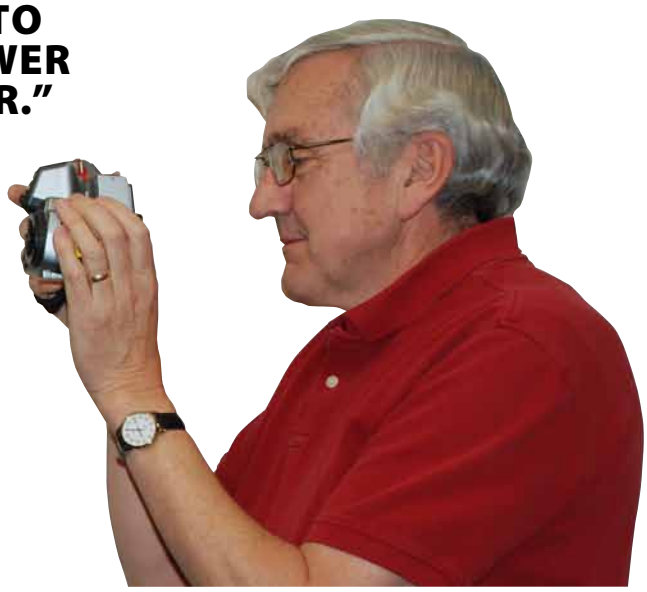


NOW

resulted in equipment that is smaller and less expensive while providing increased capabilities. For example, a decade ago, the infrared camera with accessories was the size of a suitcase and weighed 30 or more pounds; today, the camera is easier to use, has more features such as color images and recording, is no larger than a digital camera, weighs two pounds and costs less than one-quarter of the earlier camera," said Equipment Loan Manager Gary Hoffmann.

To keep serving customers with tools and support to better do their jobs while maintaining low overhead, Energy Services targets its funds for customer benefits. In fact, almost 67 percent of its funding goes directly to providing tools, tips, expert advice and input, as well as purchasing or replacing equipment available for loan. "We constantly evaluate our equipment to provide maximum value to our utility customers," said Hoffmann.

Some of the most popular loan items include high-resolution infrared cameras, power quality monitors, lighting displays and fuel cell demonstration kits. "In 2011, we co-hosted a commercial lighting workshop with Tri-State," said Langenberger. "The partnership worked really well and helped educate participants in a low-pressure way."

Which app do I use for that?

So what's changing? Mobile devices and new technology. "Phones give us access to information anywhere we go," said Horstman. "They bring customers closer to their power provider."

Representatives talked a lot about mobile communication and social media, but in the context of what makes sense for customers and how will it help them be more efficient.

Yet, many customers are just focused on their communities and reliable service. "Small municipalities are worried about being a town in 20 years," said Langenberger. "Many end-users are on fixed incomes. So, cost is critical."

The Energy Services representatives' value efficiency and cost-effectiveness. They are constantly analyzing what is happening in the industry and how they can provide the right service to customers. ☐

ENERGY SERVICES
Western Area Power Administration

Energy Services representatives met in June 2012.

Tackling environmental challenges: Natural Resources' changing process, responsibilities

Western's Environment program has experienced many changes during the past five years with the implementation of environmental requirements, processes and policies. In addition, there has been an emphasis on projects involving renewable resources, which has resulted in increased workload across all regions.

Linda Hughes, Desert Southwest environmental manager said, "The amount of interest in solar and wind generation in the southwest has intensified. With the new [Open Access Transmission Tariff] program, companies are finding new ways to generate and transmit energy to the major cities across the west."

This interest is not limited to DSW. "There are many more wind development projects to meet the growing load requirements in [Upper Great Plains'] surrounding area," said UGP Environmental Manager Nick Stas. "It has been a challenge to determine which projects will actually move forward to start the environmental process early enough to not deter the critical path," Stas explained. To meet the increased demand, Stas has cross-trained all of his staff to work with both environmental compliance and National Environmental Policy Act work.

New technology increases information sharing

New technology, like Western's Geographic Information System, has helped Environment handle the increased workload from new responsibilities and environmental complexities. "The Maintenance crews now have access to the GIS using rugged and durable notebooks, also known as Tough Books, and personal digital assistants and are able to track environmental information while out in the field," said Rocky Mountain Environmental Manager Gene Iley.

Gerry Robbins, Sierra Nevada environmental manager agreed, "The availability of information has increased with field crews using handheld devices, cell phones and text messaging. This increased communication benefits those in the field with more usable information. "The communication benefits extend beyond the field and have enhanced communication with the public, tribes and other environmental groups by being able to share better maps and data and other information pertinent to projects. Enhanced communication has also enabled better integration of project schedules and requirements for construction.

Finding equilibrium for Environmental responsibilities

Clayton Palmer, Colorado River Storage Project's environmental protection specialist, said the CRSP Management Center has a different perspective. Palmer explains, "CRSP MC's environmental program is unique in the degree to which it is involved in the environmental considerations of dams operated by the Bureau of Reclamation. Our fisheries biologists have become experts in modeling dam operations and in the environmental issues that occur downstream of dams."

Since the major Federal dams were constructed, specifically the six large dams on the Upper Colorado River, environmental considerations have become part of the conversation. Glen Canyon Dam in Arizona, Flaming Gorge Dam in Utah and the Aspinall Units in Colorado have all been subject to recent environmental review.

"Two years ago, the Department of the Interior decided that, after 15 years of field work and scientific analysis, the operation of Glen Canyon Dam should be reconsidered and adjusted. Interior is working on an environmental impact statement, which has a high public profile. Western is a cooperating agency and is actively participating as well. Western's goal in this process is to help Reclamation and the National Park Service meet environmental goals at a minimum impact to electrical power production," explained Palmer.

"The environmental impact statement for the operation of Glen Canyon Dam is emblematic of the sort of challenge the CRSP MC faces," Palmer continued. "Electricity generated by the hydropower dams on the Colorado River is a clean, renewable resource. The power generated is sold mostly to rural towns in the western United States and supplies power to Native American reservations. Yet, the construction and operation of dams has an environmental impact. The environmental staff find the balance between meeting environmental goals and producing 'clean and green' hydropower that provides electricity for the rural West."

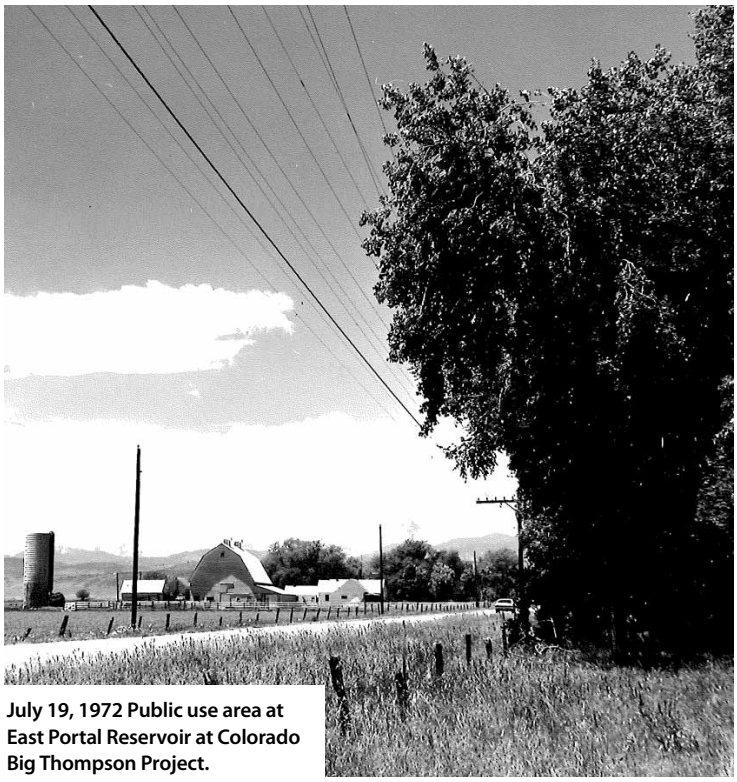
"THE ENVIRONMENTAL STAFF FIND THE BALANCE BETWEEN MEETING ENVIRONMENTAL GOALS AND PRODUCING 'CLEAN AND GREEN' HYDROPOWER THAT PROVIDES ELECTRICITY FOR THE RURAL WEST."

Sustainability as the new goal

Sustainability is a new focus for the Environment program and provides a more holistic approach to addressing pollution prevention and eliminating waste. The new sustainability goals aim to expand clean energy while improving energy efficiency, waste reduction, water conservation and sustainable acquisition. "There is more emphasis on greenhouse gas reduction than in the past, and Western has a lot of sulfur hexafluoride in old and new breakers," said Iley. "The [Environmental Protection Agency's] proposed rules on [polychlorinated biphenyls] will also have a profound impact on Western's equipment replacement program as it phases out old equipment."

This time of change also means a time of progress for Western's Environment program. The vegetation management program has become proactive instead of reactive and is addressing danger trees and adjacent vegetation before they become a hazard. In addition, Western has continued to maintain a high level of compliance and received verbal and written commendations from states and the EPA on our products, as well as receiving praise from our power customers on the work and support we are providing. ☐

Vegetation management has become an increasingly important part of Western's line maintenance. Maintaining clear rights of way ensures reliability and prevents potential fires from vegetation being too close to an energized line.



July 19, 1972 Public use area at East Portal Reservoir at Colorado Big Thompson Project.

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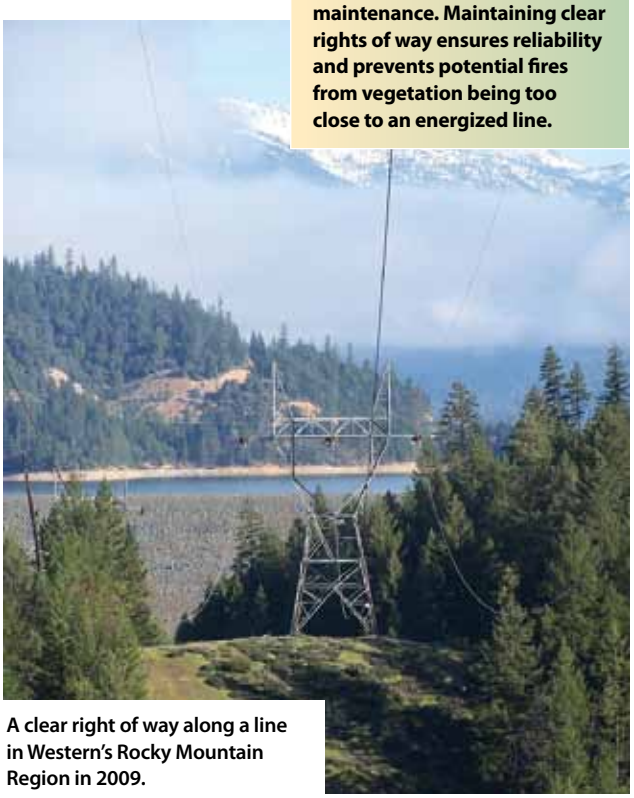


A clear right of way along a line in Western's Rocky Mountain Region in 2009.

NOW

Financial community takes forward-thinking approach

Integrity. Accountability. Transparency. Fiscal responsibility. These are characteristics of the 104 employees who support Western's Finance department and manage our funds.

In an age where everyone expects information to be ready at the touch of a smartphone or tablet, financial data is no exception; in fact, in many cases its availability is demanded even more.

"Controls continue to get tighter, which challenges our processes," said Sierra Nevada Regional Financial Manager Janice Nations. "It seems as though every month a new rule or regulation is imposed that requires a stricter control on a process or a new reporting requirement."

Those requirements mean publishing more financial data and answering more financial questions. For example, agencies within the Department of Energy used to report to the Department of the Treasury four times per year. "Now we have to report seven times a year," said Lynn Jeka, financial manager at the Corporate Services Office. "They are calling for more frequent reports with more details."

But whether it is additional transparency, increased reporting or doing more work with limited Federal funds, Western's Finance staff is ready for the task. "There have been countless process improvements over the past five years," said Nations. "We are constantly challenging the way we do things and making adjustments as necessary to ensure timelines are met."

Customers fund the gap

For a significant period of time, Western has seen its construction and rehabilitation budget, also called C&R, dwindle down to only a fraction of what it was a couple decades ago. As such, Western has turned to its customers more and more to help fill the gap.

Rocky Mountain Regional Financial Manager Larry Maass explained the increased importance of customer funding to Western and the generating agencies. "For RM ... since 2007 we've basically doubled what we've asked for from customers as we see less and less in appropriations," said Maass.

To try to overcome the limited dollars issues, Maass said they "partner more closely with the other agencies and customers and plan cash-flow requirements up to five years in advance to meet these high-dollar requirements."

He continued, "Western is not alone in this endeavor. Western competes for those same limited amount of customer dollars with Reclamation and the [Army] Corps [of Engineers]. They are facing similar aging infrastructure with reduced funding from the generation side. Coordinating the funding request priorities between all parties will continue to be vital for the overall success of the program."

Managing credit risks

In addition to limited dollars, Western also has to manage its financial risks. "The concept of risk management has affected Finance in how we

Throughout Western, Finance employees manage customer and taxpayer funds with care, including these employees from the Sierra Nevada region. Top row, left to right: Norine Larson, Denise Medina, Janice Nations and Mandy Cunningham. Bottom row, left to right: Greg Bozeman, Bonnie Hood, Megan Jones, Debbie Isakson, Nikki Costello and John Johnson.

address creditworthiness," explained Nations. "Not only is Finance actively performing credit checks and monitoring its customers' credit positions, but also the credit extended to Western is being limited."

The upside of managing these credit risks is ensured trust. "We have gained the confidence of SN customers by demonstrating our proficiency in the management of our finances through the Earned Value Management System financial reporting, the offsetting collections process and improving our methods for budget formulation, execution and reporting," said Nations.

New program requires financial incorporation

The creation of the Transmission Infrastructure Program and Western's borrowing authority as part of the 2009 Amendment to the Hoover Act also required expertise from Western's Finance office. "Incorporating TIP and the borrowing authority into our financials required us to design, test and review the system and data with great detail," said Jeka.

"But it was a true testament to Western and our Finance employees that we were able to maintain a clean audit through that transition," Jeka added.

Former Assistant Administrator Jack Dodd summed up the Financial change history: "One of the ongoing missions and goals has been doing everything we could to ensure a stable and reliable source of funds. Moving from appropriations to receipts was one step in that direction, then we took another step with net zero for our annual expenditures," said Dodd. "We continue to look at managing our finances like a business would, where our budget and funding are based on receipt of sales. The limiting factor is that cash flow doesn't always align with operations and expenditures because of capital items. In a normal business, if they don't have cash flow, they borrow, but we don't have the ability to borrow from our core mission for capital items."

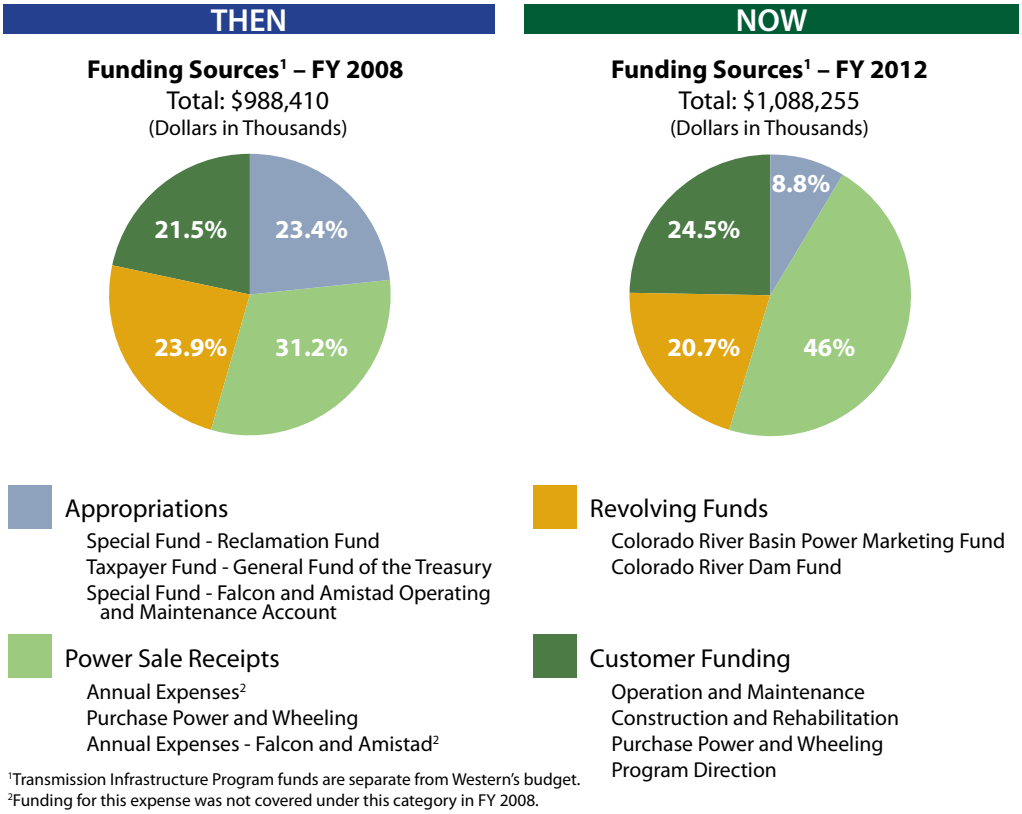
Planning for future operations

Because there has been so much change in the past five years and more changes are expected, Finance developed a Finance Operating Plan for Fiscal Years 2012 through 2014. "We've been working to document our operations plan and identify what's coming at us," said Jeka. "We want to be able to preplan for what is coming instead of just reacting to what happens."

The CFO and financial leadership team developed a mission, vision and goals for the organization that establishes a roadmap for the next 18 months. "It's a living document," said Jeka. "It will change as new initiatives and challenges come up or are developed."

But in the end, the success of the operations plan, Finance and Western comes back to one element: people. "The level of expertise across the staff is incredible," said Jeka. "We have extremely talented individuals all across Western's Finance community who work hard and are dedicated to the success of Western." □

While Western's budget continues to grow, appropriations are not increasing. Additionally, some purchase power and wheeling and other annual expenses were not covered by power sales receipts in FY 2008.



[1]Transmission Infrastructure Program funds are separate from Western's budget.
[2]Funding for this expense was not covered under this category in FY 2008.

Changes in Dispatch certifications, consolidation

In some ways, working in one of Western's Dispatch Centers hasn't changed much in the past five years. Dispatchers work their shifts, keep energy in balance and flowing between generators and consumers, and answer calls from customers, neighboring utilities and Western employees working on the system.

It's a constant exchange of information between systems and between operators. They are continuously monitoring the system and vigilantly watching its pulse to ensure the health of the grid. Additionally, they verify that there is enough generation in reserve, so at a moment's notice, more energy can be brought online if a generator trips off line or if there's an increase in energy demand, also called load.

But there are changes. A little more than ten years ago, the North American Electric Reliability Corporation implemented a System Operator Certification program requiring all system operators to be certified and then maintain continuing education requirements every three years. Then sanctionable NERC standards were implemented in 2007. NERC standards continue to evolve with more stringent requirements for dispatchers; and dispatcher actions, as well as procedures, are audited every three years.

"Reliability is difficult to measure before a blackout; however, how well electric utilities comply with the reliability standards can be measured," said Western's Reliability Compliance Program Manager Laurent Webber. "NERC's reliability standards are meant to keep the electric system reliable, and they do; large blackouts rarely occur and recovery is quick. Major utilities must have Reliability Compliance Programs to ensure everyone is performing the tasks and managing the programs that keep the bulk electric system secure and reliable."

Operations consolidation has also impacted Dispatch. Rocky Mountain Power System Dispatcher Brian Graybeal shared: "Operations has seen dramatic changes in the past two years that I have been here. We are in the hectic process of consolidating operations between Loveland, Colo., and Phoenix, Ariz. We have seen a tremendous amount of hard work from our folks and those who support us in bringing together Supervisory Control and Data Acquisition, outage tracking, switching and logging programs and in streamlining our procedures. We still have some struggles ahead, and changes are slow to evolve, but I am impressed daily by the dedication that each person takes with their responsibilities." ☐

On the lighter side

Some fun quotes that prove operators have a sense of humor:

- For Electrical System Restoration, remember: "Forget the dead, save the living."
- For Power System Operation know that: "Someone is always watching."
- We need Generation and Transmission: "Without each other we are useless."
- Remember Power Operations training: "This is where system reliability starts."

Automatic Generation Control Dispatcher Steve Anners, front, and Transmission Switching and Operations Dispatcher Don Ross, right, monitor the grid from Sierra Nevada's control room.

Procurement team manages increased complexity

It sounds fairly quiet when you walk into the Procurement office—you hear the low murmur of multiple phone conversations and the click-clack of keyboards. But these muted tones mask a highly complex process of requesting, finding and managing the contracts, services and products that keep Western running efficiently.

Western's Procurement staff work diligently to meet the constant regulatory changes, competing demands and myriad expectations from management and customers. "The complexity and growth in workload has increased dramatically since 2007," said Western Procurement Manager Deb Bean. "Our team work to help folks navigate the difficult bureaucratic process as efficiently as possible."

Desert Southwest Procurement Manager Byron McCollum added, "People inside and outside of the organization are paying attention to acquisitions more closely, and we have to continue to be good stewards of the dollars," said Rocky Mountain Procurement Manager Dutch Van Stockum.

Most of the change in Procurement revolved around staff, sourcing and the Strategic Integrated Procurement Enterprise System known as STRIPES.

Sourcing goes strategic

Procurement throughout Western has shifted to more strategic sourcing to help Western offices procure goods and services. "Our sourcing is tremendously competitive now," said McCollum. "We don't just look for the best price, we look for best value. It's much more complex because the source selection includes who has technical experience, shows past performance of type of work, if they have the staffing to support the need and the price."

However, strategic sourcing requires more coordination to ensure execution of a contract that satisfies the needs of all Western offices.

Van Stockum said, "With strategic sourcing we can realize and leverage quantity discounts."

STRIPES, other achievements prove notable

Since Feb. 1, 2012, Western has been writing new contracts through STRIPES. "Procurement users transitioned out of the old financial system and now use STRIPES exclusively," said Steve Reed, who managed the implementation of STRIPES at Western.

Other notable achievements for Procurement staff in the past five years include:

- **Operations consolidation**—the combining of like tools and systems for integration saving money and resources.
- **Revised support services contract**—RM moved to a firm, fixed-price contract to save in resource management.
- **Basic Substation remediation project**—DSW made a competitive acquisition to get the substation cleaned up.

Contracting Officers Ryan Scrivner, seated, and Cansu Teano along with Contract Specialist Kevin Mullen conduct training on the multiple award facilities contract. (Photo by Dutch Van Stockum)

Rising to the occasion

With the challenges of increased workload, changing regulation and complex sources, how has Procurement staff risen to the occasion? "By solid communications, active collaboration, positive team work, flexibility and just plain old tenacity and motivation," said Van Stockum. "We will continue to use these tools to ensure Western's mission is a success today and well into the future." □

The variety of small businesses shifts from year to year. See this comparison of small business categories with which Western has contracted work or services.

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FY 07 SMALL BUSINESS ACHIEVEMENTS

Category	Award Amounts	Percentage of Total Awards
Service Disabled Veteran-Owned Business	$1,885,102	1%
HUBzone Small Business	$22,516,606	18%
Woman-Owned Business	$34,932,539	27%
Disadvantaged Business	$55,148,426	43%
Small Disadvantaged Business	$68,310,782	53%
Awards to Small Business[1]	**$110,894,451**	**86%**
Awards to Large Business	**$17,263,566**	**14%**
TOTAL AWARDS	**$128,158,017**	**100%**

[1]Totals may not appear to add correctly due to overlapping categories.

NOW

FY 12 SMALL BUSINESS ACHIEVEMENTS

Category	Award Amounts	Percentage of Total Awards
Service Disabled Veteran-Owned Business	$13,415,760	12%
HUBzone Small Business	$11,482,750	11%
Woman-Owned Business	$25,984,811	25%
Disadvantaged Business	$26,434,133	25%
Small Disadvantaged Business	$39,490,571	38%
Awards to Small Business[1]	**$79,976,414**	**77%**
Awards to Large Business	**$23,528,096**	**23%**
TOTAL AWARDS	**$103,504,510**	**100%**

[1]Totals may not appear to add correctly due to overlapping categories.

From new to normal: TIP integrates renewables, moves to 'steady state'

TRANSMISSION INFRASTRUCTURE PROGRAM

Five years ago Western's Transmission Infrastructure Program didn't exist; but in the past three years TIP has accomplished one successful project, the Montana Alberta Tie Limited Project; started a regional construction project, the Electrical District 5 – Palo Verde Hub Project; and now supports the development of several other projects including TransWest Express, Southline and Centennial West. "It's been a major team effort with support throughout Western," said TIP Manager Craig Knoell. In addition to the specific projects, TIP is also transitioning from a start-up program to a steady-state program.

TIP has matured with established policies and procedures, including new guidelines for project management completed in October 2012. These guidelines detail the life-cycle management of TIP project activities. "The primary purpose is to establish consistency throughout the TIP portfolio while retaining needed flexibility to get the job done," said TIP Project Manager Vi Michaelis. "At the same time, we're managing our current projects, optimizing how our program works and preparing to solicit additional projects for TIP."

"FUNDING FROM WESTERN WAS ESSENTIAL TO GETTING THE MATL POWER TRANSMISSION PROJECT OFF THE GROUND."

MATL loan repaid, project continues

Western's involvement with the Montana Alberta Tie Limited Project—the first TIP project—was concluded in August when Enbridge Inc., prepaid the project loan.

"Funding from Western was essential to getting the MATL power transmission project off the ground," said Richard Bird, Executive Vice President, Chief Financial Officer and Corporate Development for Enbridge Inc., Aug. 27, 2012. "Their continued support has been of great assistance during the development phase of the project. Now, as the MATL Project approaches completion, it is beneficial for us to replace Western's initial funding with conventional financing sources available to us. We look forward to working with Western on future transmission projects."

The MATL Project will be interconnected to the 126 wind turbines at the Rim Rock Wind Farm in Montana, which became operational in September 2012.

While TIP continues to review and help with several projects in development, the future of the steady-state program is still waiting to be written. □

Administrator Tim Meeks and Johan Van't Hof, CEO of MATL, sign documents in October 2009 to close the financing on the MATL Project.

Hoover Act amendment governs TIP

Some programs under the American Recovery and Reinvestment Act of 2009 were short-term, two-year plans meant to jumpstart the economy and create more jobs. Western's borrowing authority to fund the Transmission Infrastructure Program is different—it is permanently established under Section 402 of the Recovery Act. This section, which is actually an amendment to the Hoover Power Plant Act of 1984, authorizes Western to borrow up to $3.25 billion from the U.S. Treasury to support transmission projects that interconnect renewable generation. The statute explains how Western can borrow and use Federal funding to support the development and construction of these transmission projects.

Final thoughts: My last day at Western

(Editors note: Many times employees who have spent several years at Western will send out a final email on the day they plan to depart thanking coworkers and the agency. Here are two of those messages.)

Vision: Ever-changing future

Marc DeNarie, who retired as a regional information officer from Western's Sierra Nevada region, sent the following on his last day in 2012:

"Just a quick note to say thanks to everyone for a fantastic 5+ years. Western has been a great place to work and there has been no end of challenges to keep us busy. To those I've worked closely with during my time here, a very special thanks. ***You all have the vision and enthusiasm needed in an ever-changing future. The only thing constant these days is change. Embrace it... Leverage it... Use it as an opportunity to challenge our assumptions and improve the way we do business.*** There are lots of very smart and creative people here who I have no doubt will take Western boldly into the future and continue to make this a great place to work."

My Western family, giving back

Before retiring this year, Upper Great Plains Procurement Specialist Cheryl Jones shared how important the "Western family" was to her. "My husband passed away in December 2010," said Jones. "His health had been deteriorating, and eventually we entered into hospice. During this time, I was able to use Western's Employee Assistance Program. I must say, my 'Western Family' really supported me during a difficult period, which again is indicative of the terrific people who work for Western."

Jones also had some words of wisdom to offer about giving back: "Western is a great place to work, and is unique in its mission," she said. "And in addition to just 'doing the job,' there are opportunities to become involved in Science Bowl, the Combined Federal Campaign, and other local community events.

Jones continued, "Participating in, and representing Western in the Day of Caring really shows the community that Western employees care about those around them. And the Science Bowl, although a lot of work, and yes, some stress, is a tremendously rewarding experience. I'm so hopeful for the future because of the encounters I've had with the kids in the Science Bowl." □

Looking ahead:
Be the change you want to see

When Tim Meeks became Western's administrator in 2007, he share his favorite quote from Mahatma Gandhi: "Be the change that you wish to see in the world."

Five years later, in 2012, Meeks transitioned from Western's administrator to another role serving the Department of Energy. When he left, he had the following to share: "We all have our time and season; and mine has been a season of change, exponential change. We've worked closer together as an organization and seen major success. You're amazing people and when pull in the same direction for Western's continued success you're an unstoppable force."

Dedication

To the hardworking employees (both Federal and contractor) who resourcefully keep Western running as a premier power marketing administration through changes in the industry and in the times. Since 1977, Western has served the West with federal hydropower because its employees care.

Acknowledgements

This booklet represents the experience, knowledge and history of Western's staff, thanks to the stories of those employees willing to share their tales. Special thanks to Leah Shapiro and Erika Walters for their contributions to this publication, as well as to the Public Affairs staff for editorial support and Graphic Designer Grant Kuhn who made these stories come to life through his design and graphical support.

Jen Neville
Editor

12/2012